

DETECTING PERIPHERAL POINTS OF REFLECTED RADIATION BEAM SPOTS FOR TOPOGRAPHICALLY MAPPING A SURFACE

ABSTRACT

Systems and methods of detecting peripheral points of reflected radiation
5 beam spots for topographically mapping a surface are described. In one aspect, a
radiation beam is directed toward a target location on the surface. An image of a
beam spot is captured at a location in an image plane intersecting at least a
portion of the radiation beam reflected from the target location on the surface. At
least one image plane coordinate for a peripheral point of the beam spot image is
10 identified. A relative height value is assigned to the target location based on a
mapping of the at least one image plane coordinate identified for the peripheral
beam spot point to the relative height value.